

Title (en)

A PROCESS FOR THE PRODUCTION OF CALCIUM CARBIDE AND A SHAFT FURNACE FOR CARRYING OUT THE PROCESS

Publication

EP 0171385 B1 19880518 (DE)

Application

EP 85890165 A 19850725

Priority

AT 250884 A 19840803

Abstract (en)

[origin: US4644557A] In a process for the production of calcium carbide in a shaft furnace, a plasma arc (plasma torch) is generated by the introduction of electric energy with the help of a plasma burner device penetrating the upper cover of the shaft furnace. A counter electrode is provided in the bottom part of the shaft furnace. About the plasma arc or torch, a burden mixture of calcium-oxide and carbon-containing substances is concentrically introduced so as to form a protective mound of solid burden components on the inner wall of the furnace. In order to provide an operationally safe process by using plasma burners, with which both coarse and fine-grain burden components may be employed and with which calcium carbide is obtained in higher yields with an improved utilization of the energy consumed, the burden mixture is used separately as a coarse-grain fraction and as a fine-grain fraction. The coarse-grain fraction is introduced through an annular gap between the furnace wall and the furnace cover so as to form a movable protective mound along the furnace wall. The fine-grain fraction is introduced into the space between the plasma arc and the protective mound. The process gas forming at the reaction emerges through the coarse-grain-fraction protective mound and the annular gap. A shaft furnace includes a refractorily lined furnace wall and an upper cover, through which a plasma burner device and a charging device are guided. A counter electrode is provided in the bottom part of the furnace.

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IPC 8 full level

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CPC (source: EP US)

C01B 32/942 (2017.07 - EP US); **H05B 7/00** (2013.01 - EP US)

Cited by

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